

Texas Poison Network Response to Deer Park Fire Questions

Coding Instructions

1. **Substance** = fire, smoke, benzene, or whichever specific agent of concern is expressed by the caller.
2. **Exposure Reason** = **Unintentional Environmental or Unintentional Occupational**
 - If a known exposure has not occurred & only calling for information, **Call Type** = **Environmental Information – Air Quality**
3. **Free Area 1A** = **PHemergen/Event** as this is a Public Health Emergency. This is essential for TPCN/DSHS epidemiology reporting!
4. **SPI Notes** = specifically state “Deer Park Fire” somewhere in your note and what their specific question is, what the nature of their exposure is, any reported signs and symptoms, prior medical history (especially chronic respiratory problems), therapies, etc. The more detail you can collect and document, the better.

Managing Surges in Call Volumes: We can expect an increase in calls whenever the media includes our 1-800-222-1222 number in their broadcast. During these times, it may not be possible to collect and code ALL the recommended information during your call, but do your best to balance the handling of incoming calls by quick-saving cases in Toxicall, keeping additional notes on paper to add into the Toxicall case later, and avoiding the Wrap-Up in Finesse after each incoming call. These call surges don't usually last more than 10-15 minutes after it is broadcast on each station (TV, radio, online).

FAQs:

Q. What is the flaky stuff falling from the sky?

The particulate matter or flaky stuff falling from the sky is likely to be mostly carbon based soot; there may be other vapors in the air now that the fire is out.

Q. Should I use a mask or respirator?

At the concentrations being reported for the particulates and the vapors, no respirator is necessary. However, if you choose to use a respirator, you should choose a NIOSH certified N-95 respirator. These are usually available from your local hardware stores. Such respirators usually have a small exhalation valve and two straps and the package should have a NIOSH logo. Other masks are usually not designed or very effective against the fine particles.

Q. Is the air being monitored?

Air monitoring is on-going by various groups and the results are being posted on the following links:

<https://www.readyharris.org/Deer-Park-Fire>

<https://www.tceq.texas.gov/response/itc-terminal-fire-update>

https://response.epa.gov/site/site_profile.aspx?site_id=14150

Q. What are the Exposure Agents?

A. Benzene, toluene, xylene, naphtha. These are all chemicals called volatile organic compounds (VOCs) used in the petrochemical industry (petroleum refining, and coke and coal chemical manufacturing) and in the manufacturing of rubbers, lubricants, dyes, detergents, drugs, and other chemicals.

Q. What are the common symptoms of exposure?

A. The main symptoms of exposure to be respiratory irritation

Last updated 03.22.19 at 1245pm CDT

- throat irritation, eye irritation, headache, dizziness, skin irritation.
- these are short term and should subside within hours
- long term effects at the levels reported are not expected
- A public concern is the risk of cancer (AML - acute myelogenous leukemia) from benzene. This is essentially non-existent at the current measured levels (1.3 ppm) for a few hours.
 - The threshold lowest risk for acute myelogenous leukemia from air benzene is 200 ppm-years which means it would require 200 years of 8 hours per day at a level of 1 ppm to reach the lowest threshold risk for AML.
 - The levels that have been reported currently are far below the levels required to cause cancer.

Q. What is the half-life of benzene in humans?

A. 15-20 hours.

Q. What happens with the benzene we inhale?

A. Most of the benzene inhaled is exhaled.

Q. What does the poison center recommend?

A. Symptomatic treatment of throat irritation, eye irritation, headache, dizziness, skin irritation. No laboratory tests are needed. Benzene levels are not necessary.

Q. Will I get cancer from this?

A. There is NO clinically significant concern for leukemia (AML = acute myelogenous leukemia) from exposure to benzene at levels seen in the Deer Park Fire. The levels that have been reported currently are far below those required to cause cancer. See above.

Q. Do I have to stay indoors?

A. At this time follow the recommendations the state agencies have released. An abundance of precaution is being employed for your safety.

Q. When will the shelter in place be lifted?

A. This will be determined by the state and local/county government officials in the field monitoring the air quality levels; you can get more information at www.readyharris.org/Deer-Park-Fire

Q. Why were the schools closed?

A. While there is currently no data to support dangerously elevated levels of any of the chemicals released, incident command decision makers decided to close schools based on having limited data and wanting more information prior to declaring schools completely safe. An abundance of caution was employed for your safety.

Q. Does anything change for people in the Deer Park area being exposed to the smoke?

A. No. Supportive care. No specific testing is needed.

Q. Should first responder with symptoms be treated differently?

A. First responders who have been exposed for hours or have more serious symptoms should seek medical care.

Q. Can you give me any additional information?

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A. We are still gathering data on a daily and hourly basis.

Additional data sources include:

- For most up to date information on the Deer Park Fire, please visit this website: www.readyharris.org/Deer-Park-Fire.
- If you have questions or concerns regarding a possible exposure please call our poison specialists at 1-800-222-1222.

Our recommendations may change according to the data we receive as the day progresses.

Reference: Wong: Risk of acute myelocytic leukemia in workers exposed to benzene. Occupational Environmental Medicine 1995;52:380-384

ATTENTION SPIs:

The following is the recommended guidance for health care facilities from the Harris County Public Health:

3.21.2019 1330

Recommended Guidance for the handling and treatment of patients who present with suspected Benzene exposure.

- If a patient presents to your facility for care and claims to possibly have been exposed to Benzene in the area of concern, it is **not** recommended that the patient be decontaminated. As always, your facility should take any necessary precautions that you feel are appropriate given the situation.
- If the patient presenting to the hospital is a first-responder or plant worker who was located at the ITC Facility in Deer Park and immediately transported to your facility, follow your facility's standard decontamination procedure.

Please remember to use EMTrack for any patients that are received related to the ITC Tank Fire or Benzene exposure.

This message is a guidance that has been approved by the Hazardous Materials Team and Harris County Public Health.

Last updated 03.22.19 at 1245pm CDT

Benzene Detected In Air Near Deer Park Chemical Plant Fire

Harris County Public Health

March 21, 2019

10:30 AM

Harris County Public Health (HCPH) has been notified by officials that benzene has been detected in the air near the site of the Deer Park incident. The cities of Deer Park and Galena Park have issued Shelter-in-Place notices. Several school districts have been closed today due to the incident. As always, our main public health concern remains for the health and safety of the community.

Benzene is a widely used chemical that is a natural part of crude oil, gasoline, and cigarette smoke. It is a colorless liquid with a sweet odor. Breathing benzene vapor in small amounts can cause headache, dizziness, drowsiness, or nausea. With more serious exposure, benzene may cause sleepiness, stumbling, irregular heartbeats, fainting, or even death. Benzene vapors are mildly irritating to the skin, eyes, and lungs. The elderly, children, pregnant women, those who have respiratory issues and those who are immunosuppressed may be especially impacted.

HCPH is recommending that those experiencing symptoms seek medical attention. We are also conducting active surveillance with area hospitals to monitor the health impact of this incident. If you see patients exhibiting the above symptoms with possible exposure in the affected areas, please report to HCPH by calling (713-439-6012) or faxing (713-439-6306) the patient's age, gender, symptoms, and ZIP code of residence.

There is no specific antidote for benzene, but its symptoms can be treated and most exposed persons recover fully. A single small exposure from which a person recovers quickly is not likely to cause delayed or long-term effects. After a severe exposure, some symptoms may take a few days to develop. Repeated exposure to benzene may cause aplastic anemia, pancytopenia, or leukemia.

According to CDC, several tests can show if a patient has been exposed to benzene. All of these tests are limited in what they can tell you. The test for measuring benzene in a patient's breath must be done shortly after exposure. Benzene can also be measured in the blood; however, since benzene disappears rapidly from the blood, this test is only useful for recent exposures. Benzene tests are offered through major commercial laboratories.

If you see patients with the compatible symptoms, please consider and ask the relevant exposure history. HCPH will continue working with partners, including area providers and hospitals, to monitor the ongoing situation and will provide updates accordingly.

For more information about the incident and chemicals involved, please visit <https://www.readyharris.org/> and <https://www.atsdr.cdc.gov/>. Fact sheets about benzene are attached to this health alert, and a full toxicological profile for benzene can be found at <https://www.atsdr.cdc.gov/ToxProfiles/tp3.pdf>

If you have additional questions, please contact HCPH at 713-439-6012.

Hotline for the public (Harris Health "Ask Nurse Hotline"): 713-634-1110.

Last updated 03.22.19 at 1245pm CDT

HOUSTON AREA HEALTH DEPARTMENTS

Harris County Public Health

Telephone: (713) 439-6000

Fax: (713) 439-6306

After Hours: (713) 755-5000

<http://publichealth.harriscountytexas.gov/>

Houston Health Department

Telephone: (832) 393-5080 24 hr. #

Fax: (832) 393-5232

www.houstontx.gov/health/index.html

Texas Department of State Health Services

Health Service Region 6/5 South

Telephone: (713) 767-3000

Fax: (713) 767-3006

After hours: (800) 270-3128

www.dshs.state.tx.us/region6-5/default.shtm

Galveston County Health District

Telephone: (409) 938-2322

Fax: (409) 938-2399

After hours: (888) 241-0442

www.gchd.org

Montgomery County Public Health Department

Telephone: (936) 523-5026

Fax: (936) 539-9272

After hours: (888) 825-9754

www.mchd-tx.org/publichealth

Fort Bend County Health and Human Services

Telephone: (281) 342-6414

Fax: (281) 342-7371

After hours: (281) 434-6494

www.fortbendcountyhhs.com/

Brazoria County Health Department

Telephone: (979) 864-2168

Fax: (979) 864-3694

After hours: (800) 511-1632

www.publichealthmatters.net

FYI only...from Air Alliance Houston (03/21/19 8:43AM) : So far, we know that the chemicals that were burning included at least Naphtha, Xylene, Toluene, and Benzene, all of which are toxic and can cause diverse adverse health impacts, ranging from short-term effects, such as nausea and headaches, to longer-term effects, including risk of cancer and risk to the nervous system, among others. While the exact amounts released of each of these chemicals are currently unknown, ITC has estimated that the blaze resulted in more than 9 million pounds of pollution to be released into the air just during the first day of the incident. This is more than what all the facilities together in the Houston area released during Hurricane Harvey, and in just one single day.

What appears to be happening is that the damaged tanks are still leaking product and there is product pooled inside the dike area. The material is vaporizing and generating VOCs levels including benzene. Overnight, the more stable air typical of nighttime conditions reduced the dispersion of the vapors even though the cooler temperatures reduced the vaporization rate. The Incident Command has been employing vapor suppression techniques, but, for whatever reason, they may not be as effective as anyone would like. As ambient temperatures rise after sunrise, vaporizations is likely to increase. If the winds do not also increase, dispersion may be minimal. Today (3/21/19) is likely to be the worst day, but the problem will continue until the liquid product and possibly some of the saturated soils inside the dike area are removed.

Last updated 03.22.19 at 1245pm CDT